



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/719,149 | 11/21/2003 | Steven R. Sedlmayr | AUO1020 | 2117 |

7590 12/06/2005

PatentEsque Law Group, LLP
P.O. Box 400
Los Altos, CA 94023

| |
|----------|
| EXAMINER |
|----------|

FINEMAN, LEE A

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2872

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/7/19, 149 | SEDLMAYR, STEVEN R. | |
| | Examiner | Art Unit | |
| | Lee Fineman | 2872 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 233-235, 239-249, 253-263, 267-277 and 281-288 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 233-235, 239-249, 253-263, 267-277 and 281-288 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to an amendment filed 20 September 2005 in which claims 239-240, 253-254, 267-268, 275 and 281-282 were amended and claims 237-238, 251-252, 265-266 and 279-280 were cancelled. Claims 233-235, 239-249, 253-263, 267-277 and 281-288 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 233-234, 237-248, 251-262, 265-276 and 279-288 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atarashi et al., US 5,172,254 in view of Baur et al., US 5,115,305.

Atarashi et al. disclose in fig. 5 a system and method of producing a modulated beam of electromagnetic energy/light, comprising:

[a] means (11 and 12) for providing a substantially collimated (by 12) primary beam of electromagnetic energy/light having a predetermined range of wavelengths and randomly changing orientations of a chosen component of electromagnetic wave field vectors;

[b] means (13) for resolving the primary beam of electromagnetic energy/light into a primary first resolved beam (travels toward 21BP) of electromagnetic energy/light having substantially a first selected predetermined orientation of a chosen component of the

Art Unit: 2872

electromagnetic wave field vectors (P) and a primary second resolved beam (travels toward 16) of electromagnetic energy having substantially a second selected predetermined orientation of a chosen component of the electromagnetic wave field vectors (S);

[d] means (21BP, 21GP1, 21BS, 21GS1) for separating each of the primary resolved beams of electromagnetic energy/light into two or more separate beams of electromagnetic energy/light, each of the separate beams of electromagnetic energy/light having a selected predetermined orientation of a chosen component of electromagnetic wave field vectors (P or S);

[e] means (15BP, 15GP, 15RP, 15BS, 15GS, 15RS) for altering the selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of a plurality of portions of each of the separate beams of electromagnetic energy/light by passing each of the separate beams of electromagnetic energy/light through a respective one of a plurality of altering means whereby the selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of the plurality of portions of each of the separate beams of electromagnetic energy/light is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner each of the separate beams of electromagnetic energy/light passes through the respective one of the plurality of means for altering the selected predetermined orientation of the chosen component of the electromagnetic wave field vectors (column 7, line 56-column 8, line 12);

[f] [i] means (21GP2, 21RP) for combining the altered separate beams of electromagnetic energy/light of the primary first resolved beam of electromagnetic energy/light into a first single collinear beam of electromagnetic energy/light without substantially changing the altered selected predetermined orientation of the chosen component of the electromagnetic wave field

Art Unit: 2872

vectors of the plurality of portions of each of the separate beams of electromagnetic energy/light, and [ii] means (21GS2, 21RS) for combining the altered separate beams of electromagnetic energy/light of the primary second resolved beam of electromagnetic energy/light into a second single collinear beam of electromagnetic energy/light without substantially changing the altered selected predetermined orientation of the chosen component of the electromagnetic wave field vectors of the plurality of portions of each of the separate beams of electromagnetic energy;

[g] [i] means (17) for resolving from the first single collinear beam of electromagnetic energy a first resolved beam of electromagnetic energy/light having substantially a first selected predetermined orientation of a chosen component of electromagnetic wave field vectors and a second resolved beam of electromagnetic energy/light having substantially a second selected predetermined orientation of a chosen component of electromagnetic wave field vectors, and [ii] means (17) for resolving from the second single collinear beam of electromagnetic energy/light a first resolved beam of electromagnetic energy/light having substantially a first selected predetermined orientation of a chosen component of electromagnetic wave field vectors and a second resolved beam of electromagnetic energy/light having substantially a second selected predetermined orientation of a chosen component of electromagnetic wave field vectors; means (19) for passing at least one of the resolved beams of electromagnetic energy/light from step [g] to a projection means (20), which is a means for passing one of the resolved beams of electromagnetic energy from step [g] [i] to a first side of a projection means (left side 20, in so far as at least part of the beam is projected to the left side) and a means for passing one of the resolved beams of electromagnetic energy from step [g] [ii] to a second side of a projection means (right side 20, in so far as at least part of the other beam is projected to the right side); and

Art Unit: 2872

means (21GP1, 21GS2 or 15BP, 15GP, 15RP, 15BS, 15GS, 15RS) for adjusting the electromagnetic spectrum of at least one of the separate beams of electromagnetic energy/light; wherein the means for adjusting the electromagnetic spectrum of at least one of the separate beams of electromagnetic energy/light is also the separating means and includes means (21GP1, 21GS2) for adjusting a predetermined range of wavelengths of at least one of the separate beams of electromagnetic energy/light or wherein the means for adjusting the electromagnetic spectrum of at least one of the separate beams of electromagnetic energy includes a means (15BP, 15GP, 15RP, 15BS, 15GS, 15RS) for adjusting a magnitude of at least one of the separate beams of electromagnetic energy (column 10, lines 8-11, in so far as density in this context is considered the intensity or magnitude of the light). Atarashi et al. disclose the claimed invention except for [c] means for rotating the second selected predetermined orientation of a chosen component of the electromagnetic wave field vectors of the primary second resolved beam of electromagnetic energy/light to be substantially the same as the first selected predetermined orientation of a chosen component of the electromagnetic wave field vectors of the primary first resolved beam of electromagnetic energy. Baur et al. teaches in fig. 1, system and method of producing a modulated beam of electromagnetic energy/light, comprising which includes resolving, rotating, separating, altering, combining and resolving a beam of electromagnetic energy/light. More specifically Baur et al. teach means (33) for rotating the second selected predetermined orientation (P) of a chosen component of the electromagnetic wave field vectors of the primary second resolved beam (24) of electromagnetic energy/light to be substantially the same (S) as the first selected predetermined orientation (S) of a chosen component of the electromagnetic wave field vectors of the primary first resolved beam (26) of electromagnetic energy (column 9, lines

Art Unit: 2872

21-28, as well as a second means (45) to be able to recombine the altered beams with a polarized beam splitter (see column 8, lines 2-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the means (both 33 and 45) to rotate polarization of Baur et al. to the system of Atarashi et al. to be able to use components with like polarizers thus reducing the number of different parts in the system. The method of utilizing the structure of the claim is inherent therein.

3. Claims 235, 249, 263 and 277 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atarashi et al. in view of Baur et al. as applied to claims 233, 247, 261 and 275 above, and further in view of Konno et al., US 4,497,015.

Atarashi et al. in view of Baur et al. as applied to claims 233, 247, 261 and 275 above disclose the claimed invention except for the primary beam being a having a rectangular cross sectional area. Konno et al. disclose a light illumination device (fig. 5) that produces a primary beam (at M) that has a rectangular cross sectional area (using lens element 102, fig. 3; column 3, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the light source of Atarashi et al. in view of Baur et al. with that of Konno et al. to meet the needed rectangular shape for a particular component, application or device (Konno, column 3, lines 3-5).

Response to Arguments

4. Applicant's arguments filed 20 September 2005 have been fully considered but they are not persuasive.

Applicant argues on page 16, paragraphs 3 and 4 of the remarks that the combination of Atarashi and Baur would be inoperable if only one half-wave plate was added. The examiner would like to point out that this argument is moot as the rejection adds both means from Baur (33 and 45) to provide rotation of the polarization for separation and recombining of the beams. It is noted that the applicant acknowledges this fact on page 16, paragraph 5 of the remarks.

Applicant further argues (page 16, paragraph 5-page 17, lines 1-3) that it is not logical, and therefore, not obvious to add two half-wave plates because it “would increase cost without achieving anything more (or different) than what Atarashi is already accomplishing.” The examiner respectfully disagrees and would first like to point out that equivalent systems are commonly considered obvious. Secondly, as stated in the rejection, adding the half-wave plates would enable the user to use components with like polarizers thus reducing the number of different parts in the system. In other words, be able to source/stock more of the same items that would provide better/easier inventory management and may even provide a cost saving from bulk buying. Clearly, there is a logical reason/motivation to use the equivalent system with the two half-wave plates and therefore the rejection is appropriate.

Finally, in response to applicant's argument that because the output beams of the two references are different, adding half-wave plates of Baur would alter the output beam of Atarashi (page 17, paragraph 2), the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

5. It is noted by the Examiner that the claim objections made in the previous Office Action have been withdrawn due to cancellation of the claims by the Applicant.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF

November 30, 2005



MARK A. ROBINSON
PRIMARY EXAMINER